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=> dis his

     (FILE 'HOME' ENTERED AT 08:34:04 ON 27 APR 2002)

     FILE 'FSTA' ENTERED AT 08:34:11 ON 27 APR 2002
L1          3209 S STRAWBERRY OR STRAWBERRIES
L2             0 S L1 AND SISTRUNK
L3             0 S L1 AND SISTRUNCK
L4            44 S L1 AND COLOR
L5             0 S L4 AND PRATT
L6             0 S L4 AND LIGHT(W)COLOR
L7             7 S L4 AND LIGHT
L8         25786 S JUICE#
L9           175 S L8 AND COLOR
L10            4 S L9 AND BLEND#
L11          147 S STRAWBERRIES AND GREEN
L12          147 S L11 AND GREEN(P)STRAWBERRIES
L13           10 S L12 AND CARDINAL
L14            0 S L13 AND SUNRISE
L15          178 S L8 AND(CRANBERRY OR CRANBERRIES)
L16          153 S L15 AND JUICE
L17            6 S L16 AND COLOR
```

ANSWER 4 OF 4 FSTA COPYRIGHT 2002 IFIS

AN 1984(09):H1764 FSTA

TI **Color** stability of apple and pear **juices** blended with fruit **juices** containing anthocyanins.

AU Spayd, S. E.; Nagel, C. W.; Hayrynen, L. D.; Drake, S. R.

CS Dep. of Food Sci. & Human Nutr., Washington State Univ., Prosser, Washington 99350, USA

SO Journal of Food Science, (1984), 49 (2) 411-414

DT Journal

LA English

AB Apple and pear **juices** blended with anthocyanin pigmented **juices** developed haze and colour stability during commercial marketing. To determine factors contributing to these problems, **juice** from apple and d'Anjou pear (prepared from whole fruit) and 'Bartlett' pear (peels and cores) were blended with 5, 10, 20% 'Concord' grape, 'Bing' cherry, or red or black raspberry **juice**. During storage at 25.degree. C for up to 48 wk, turbidity, polymeric colour, and % colour due to tannin increased, while anthocyanin concn. decreased. As % anthocyanin pigmented **juice** increased, turbidity and polymeric colour increased and % colour due to tannin decreased. Within a given base **juice**, turbidity was highly correlated with polymeric colour (r = 0.78-0.97).

CC H (Alcoholic and Non-Alcoholic Beverages)

CT ANTHOCYANINS; **APPLE JUICES**; COLOUR; **FRUIT JUICES**; PEARS; TURBIDITY; **APPLE-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**; HAZE; **PEAR-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**

ANSWER 4 OF 4 FSTA COPYRIGHT 2002 IFIS

AN 1984(09):H1764 FSTA

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CC H (Alcoholic and Non-Alcoholic Beverages)

CT ANTHOCYANINS; **APPLE JUICES**; COLOUR; **FRUIT JUICES**; PEARS; TURBIDITY; **APPLE-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**; HAZE; **PEAR-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**

662 FSTA

TI Changes in **color** parameters of clarified apple and carrot **blend juice** using response surface methodology.

AU Jun Ho Lee; Yong Hee Choi

CS Div. of Food, Biol. & Chem. Eng., Taegu Univ., Kyungpook 712-714, Korea. Tel. 82 53 860 6535. Fax 82 53 850 6539. E-mail leejun(a)biho.taegu.ac.kr

SO Food Science and Biotechnology, (2001), 10 (6) 673-676, 15 ref. ISSN: 1226-7708

DT Journal

LA English

AB Ultrafiltration was used to clarify a **blend** of apple and carrot **juice**; effects of **blend** ratio (apple:carrot, 3:1, 1:1, 1:3), temp. (5, 25, 45.degree.C) and ultrafiltration pressure (100, 150, 200 kPa) were determined on **juice** colour. Experiments were conducted in a plate-type ultrafiltration system using membranes with a mol. wt. cut off of 10 000 Da and data was analysed using response surface methodology. A temp. increase from 5 to 25.degree.C markedly increased brightness of **juice** samples, which then decreased at 45.degree.C. Brightness decreased considerably as inlet pressure increased from 100 to 150 kPa and increased thereafter. However, brightness was not directly affected by the **blend** ratio. Redness increased considerably with temp. and the **blend** ratio and also with pressure increases from 100 to 150 kPa. Yellowness was similarly affected by inlet pressure, but decreased linearly with increases in both temp. and **blend** ratio. .DELTA.E decreased considerably as the **blend** ratio increased. Overall, the **blend** ratio (i.e. the amount of apple present) was found to have the greatest effect on **juice** colour.

CC H (Alcoholic and Non-Alcoholic Beverages)

CT **APPLE JUICES**; COLOUR; MIXING; PRESSURE; TEMPERATURE; ULTRAFILTRATION; **VEGETABLE JUICES**; BLENDING; **CARROT JUICES**; TEMP.

662 FSTA
TI Changes in **color** parameters of clarified apple and carrot **blend juice** using response surface methodology.
AU Jun Ho Lee; Yong Hee Choi
CS Div. of Food, Biol. & Chem. Eng., Taegu Univ., Kyungpook 712-714, Korea. Tel. 82 53 860 6535. Fax 82 53 850 6539. E-mail leejun(a)biho.taegu.ac.kr
SO Food Science and Biotechnology, (2001), 10 (6) 673-676, 15 ref. ISSN: 1226-7708
DT Journal
LA English
AB Ultrafiltration was used to clarify a **blend** of apple and carrot **juice**; effects of **blend** ratio (apple:carrot, 3:1, 1:1, 1:3), temp. (5, 25, 45.degree.C) and ultrafiltration pressure (100, 150, 200 kPa) were determined on **juice** colour. Experiments were conducted in a plate-type ultrafiltration system using membranes with a mol. wt. cut off of 10 000 Da and data was analysed using response surface methodology. A temp. increase from 5 to 25.degree.C markedly increased brightness of **juice** samples, which then decreased at 45.degree.C. Brightness decreased considerably as inlet pressure increased from 100 to 150 kPa and increased thereafter. However, brightness was not directly affected by the **blend** ratio. Redness increased considerably with temp. and the **blend** ratio and also with pressure increases from 100 to 150 kPa. Yellowness was similarly affected by inlet pressure, but decreased linearly with increases in both temp. and **blend** ratio. .DELTA.E decreased considerably as the **blend** ratio increased. Overall, the **blend** ratio (i.e. the amount of apple present) was found to have the greatest effect on **juice** colour.
CC H (Alcoholic and Non-Alcoholic Beverages)
CT **APPLE JUICES**; COLOUR; MIXING; PRESSURE; TEMPERATURE; ULTRAFILTRATION; **VEGETABLE JUICES**; BLENDING; **CARROT JUICES**; TEMP.

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PASSWORD:
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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Jan 25   BLAST(R) searching in REGISTRY available in STN on the Web
 NEWS  3  Jan 29   FSTA has been reloaded and moves to weekly updates
 NEWS  4  Feb 01   DKILIT now produced by FIZ Karlsruhe and has a new update
                   frequency
 NEWS  5  Feb 19   Access via Tymnet and SprintNet Eliminated Effective 3/31/02
 NEWS  6  Mar 08   Gene Names now available in BIOSIS
 NEWS  7  Mar 22   TOXLIT no longer available
 NEWS  8  Mar 22   TRCTHERMO no longer available
 NEWS  9  Mar 28   US Provisional Priorities searched with P in CA/CAplus
                   and USPATFULL
 NEWS 10  Mar 28   LIPINSKI/CALC added for property searching in REGISTRY
 NEWS 11  Apr 02   PAPERCHEM no longer available on STN.  Use PAPERCHEM2
instead.
 NEWS 12  Apr 08   "Ask CAS" for self-help around the clock
 NEWS 13  Apr 09   BEILSTEIN: Reload and Implementation of a New Subject Area
 NEWS 14  Apr 09   ZDB will be removed from STN
 NEWS 15  Apr 19   US Patent Applications available in IFICDB, IFIPAT, and
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 NEWS 16  Apr 22   Records from IP.com available in CAPLUS, HCAPLUS, and
ZCAPLUS
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 NEWS 18  Apr 22   Federal Research in Progress (FEDRIP) now available

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* * * * * * * * * *     * STN  Columbus  * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:34:04 ON 27 APR 2002

=> file fsta

COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY     SESSION
FULL ESTIMATED COST                                         0.21        0.21

FILE 'FSTA' ENTERED AT 08:34:11 ON 27 APR 2002
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FILE LAST UPDATED: 22 APR 2002      <20020422/UP>
FILE COVERS 1969 TO DATE.

<<< FSTA HAS BEEN RELOADED AND MOVES TO WEEKLY UPDATES.
                                                  SEE NEWS 41 <<<

=> s strawberry or strawberries

          1979 STRAWBERRY
          2378 STRAWBERRIES
L1        3209 STRAWBERRY OR STRAWBERRIES

=> s l1 and Sistrunk

             0 SISTRUNK
L2           0 L1 AND SISTRUNK

=> s l1 and sistrunck

             0 SISTRUNCK
L3           0 L1 AND SISTRUNCK

=> s l1 and color

          1983 COLOR
L4          44 L1 AND COLOR

=> s l4 and Pratt

            16 PRATT
L5           0 L4 AND PRATT

=> s l4 and light(w)color

         12063 LIGHT
          1983 COLOR
             1 LIGHT(W)COLOR
L6           0 L4 AND LIGHT(W)COLOR

=> s l4 and light

         12063 LIGHT
L7           7 L4 AND LIGHT

=> dis all l7 1-7


L7   ANSWER 1 OF 7  FSTA  COPYRIGHT 2002 IFIS
```

AN 2000(06):J1310 FSTA
TI Influence of proce[redacted]ng and storage conditions in s[redacted]awberry jam **color**.
AU Garcia-Viguera, C.; Zafrilla, P.; Tomas-Barberan, F. A.
CS Lab. Fitoquimica, Dep. Ciencia y Tec. de Alimentos, CEBAS-CSIC, Apdo Correos 4195, 30080 Murcia, Spain. E-mail cgviguera(a)natura.cebas.csic.es
SO Food Science and Technology International/Ciencia y Tecnologia de Alimentos Internacional, (1999), 5 (6) 487-492, 14 ref. ISSN: 1082-0132
DT Journal
LA English
SL Spanish
AB The influence of processing and storage on colour and anthocyanin content of **strawberry** jams was studied. A series of trials was carried out on the effects of processing (boiling) time, jam storage temp., presence/absence of **light** during storage, and long term frozen storage of fruit prior to jam preparation. Processing time was shown to be a determining factor of colour quality as boiling for >15 min had a deleterious effect on jam colour. Simulated daylight conditions caused insignificant colour and anthocyanin losses during storage, compared with jams stored in total darkness. However, no direct relationship was found between anthocyanin loss during processing and storage, and resulting jam colour. Storage of fruit for 1 yr at -20.degree.C prior to jam preparation resulted in anthocyanin losses of 77%, whereas fruit stored for 6 months had <20% anthocyanin loss.
CC J (Fruits, Vegetables and Nuts)
CT ANTHOCYANINS; BOILING; COLOUR; JAMS; STORAGE; **STRAWBERRIES**; **STRAWBERRY JAMS**

L7 ANSWER 2 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1997(07):H0174 FSTA
TI Comparison of the stability of selected anthocyanin colorants in drink model systems.
AU Duhard, V.; Garnier, J. C.; Megard, D.
CS Correspondence (Reprint) address, D. Megard, Aromes de Bretagne-Diana, BP 8, 35560 Antrain sur Couesnon, France
SO Agro Food Industry hi-tech, (1997), 8 (1) 28-34, 57 ref.
DT Journal
LA English
AB Colorant and stability properties of colorants based on red cabbage, grape, hibiscus, purple-corn, elderberry, red beet and cochineal were compared in sugar and non-sugar drink model systems. Red cabbage (RC) extract imparted a purple-red **color** similar to that of beet red and more pink-purple than that of the other anthocyanin extracts tested, which displayed **strawberry**-red to brown-red hues at pH .ltoreq.4.0. RC pigments were more stable than other anthocyanin pigments during heating (80.degree.C) of drink model at pH 3.0 and more stable than most of them at pH 3.5. At pH 4.0, grape showed the best heat stability compared to other anthocyanin sources. However, at pH<4.0, RC-colored drink models displayed a purple hue for as long as 24h at 80.degree.C, whereas all the other tested anthocyanin extracts produced brown-red drinks as early as 8h at 80.degree.C, and beet red as early as 1h at 80.degree.C. Grape and RC were the most stable anthocyanin sources during **light** exposure of drink models, both at pH 3.0 and 4.0, for as long as 8 weeks at 20.degree.C. In these conditions, cochineal extracts showed extremely high **light** and heat stability, over all the anthocyanin extracts.
CC H (Alcoholic and Non-Alcoholic Beverages)
CT ADDITIVES; ANTHOCYANINS; AROMATIC COMPOUNDS; BEVERAGES; COLORANTS; PHYSICAL PROPERTIES; PIGMENTS; STABILITY

L7 ANSWER 3 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1995(10):J0060 FSTA
TI Development of aroma volatiles and **color** during postharvest ripening of Kent **strawberries**.
AU Miszczak, A.; Forney, C. F.; Prange, R. K.
CS Agric. & Agri-Food Canada, Kentville Res. Cent., 32 Main St., Kentville, NS B4N 1J5, Canada
SO Journal of the American Society for Horticultural Science, (1995), 120 (4)
650-655, 25 ref.
ISSN: 0003-1062
DT Journal
LA English
AB Kent **strawberries** were harvested at red, pink and white states of development, and stored at 15.degree.C in the **light**. Fruit were sampled over a 10-day period and evaluated for volatile production and surface colour. Volatile production by red and pink fruit peaked after 4 days of storage. Max. volatile production by red fruit was 8- and 25-fold greater than max. production by pink and white fruit, respectively. Aroma volatiles were not detected in the headspace over white berries until 4 days following harvest after which volatile production increased through the tenth day of storage. Changes in the surface colour of white berries during postharvest ripening coincided with the production of volatiles. In another experiment, red, pink, and white Kent **strawberries** were stored for 3 days at 10 or 20.degree.C in the dark or **light**. Fruit were then evaluated for volatile production, wt. loss, anthocyanin content, and surface colour changes. White berries produced volatile esters after 3 days of storage at 20.degree.C in the **light**. Both **light** and temp. influenced the relative production of the volatiles produced by pink fruit. Fresh wt. loss, colour change, and anthocyanin content were temp. and **light** dependent.
CC J (Fruits, Vegetables and Nuts)
CT COLOUR; FRUITS SPECIFIC; PHYSICAL PROPERTIES; RIPENING; **STRAWBERRIES**; VOLATILE COMPOUNDS

L7 ANSWER 4 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1995(06):J0055 FSTA
TI Response in genotypic and breeding value to a single generation of divergent selection for fresh fruit **color** in **strawberry**.
AU Shaw, D. V.; Sacks, E. J.
CS Pomology Dep., Univ. of California, Davis, CA 95616, USA
SO Journal of the American Society for Horticultural Science, (1995), 120 (2)
270-273, 20 ref.
ISSN: 0003-1062
DT Journal
LA English
AB Four sets of selected **strawberry** genotypes were generated from within a single breeding population to evaluate the correspondence between predicted and realized selection response for fresh fruit colour traits. Genotypes were selected for extreme phenotypes, dark or **light**, of either internal or external colour value (CIELAB L.sup.*). Realized selection response was slightly larger than predicted for internal and external L.sup.* when calculated for selected genotypes. >50% of the selected genotypes had genotypic values for L.sup.* outside the range of the original parents. Realized selection response for breeding value in exterior and interior colour was slightly less than predicted. Compared in a different way, genotypic selection response for external colour was significantly greater than selection response for breeding value, whereas

genotypic and breeding value responses did not differ for internal colour.

These observations suggest the presence of some non-additive genetic variance for external colour but support the conclusion that the heritabilities predicted previously were reasonably accurate. Estimates of variance components within each of the offspring populations demonstrated that genetic variances were modified substantially by one generation of selection. Selection for dark fruit colour reduced genetic variance to nonsignificant levels, with internal colour more affected than external colour. Total genetic variances within both of the offspring populations from parents selected for **light** colour were changed little by one generation of selection, but substantial dominance variance was detected that had not been found in the original population. The rapid response to selection and large changes in the distribution of genetic variances may indicate the presence of a few genes with comparatively large effect in **strawberry** colour expression. Additional divergent selection response can be expected, but primarily towards **light** fruit colour.

CC J (Fruits, Vegetables and Nuts)

CT COLOUR; FRUITS SPECIFIC; GENETICS; PHYSICAL PROPERTIES; **STRAWBERRIES**; GENOTYPE

L7 ANSWER 5 OF 7 FSTA COPYRIGHT 2002 IFIS

AN 1993(12):J0058 FSTA

TI Postharvest **color** development of **strawberries**: influence of maturity, temperature and **light**.

AU Kalt, W.; Prange, R. K.; Lidster, P. D.

CS Agric. Canada, Res. Sta., Kentville, NS B4N 1J5, Canada

SO Canadian Journal of Plant Science, (1993), 73 (2) 541-548, 9 ref. ISSN: 0008-4220

DT Journal

LA English

SL French

AB **Strawberries** (cv. Blomidon) that were either completely white or red at harvest were stored up to 8 days under various temp. and **light** conditions to examine the effects of storage conditions on postharvest colour development. **Strawberries**, stored at 5, 10, 20 or 30.degree.C and at **light** levels of 0, 100 or 200 .mu.mol m.sup.-.sup.2 s.sup.-.sup.1, were sampled for anthocyanin concn., surface colour, total soluble solids, titratable acidity, pH of the berry surface and berry wt. loss after 0, 1, 2, 5 and 8 days of storage. Anthocyanin concn. and surface colour increased during storage with greater changes in the white-harvested than red-harvested fruit. Temp., and to a lesser extent **light**, affected rate of **strawberry** colour development during storage. After 8 days, the proportions of the 2 major **strawberry** anthocyanins, pelargonidin 3-glucoside and cyanidin 3-glucoside, were different in red-harvested fruit and white fruit that became red during storage, compared to field-ripened fruit at harvest.

CC J (Fruits, Vegetables and Nuts)

CT ANTHOCYANINS; AROMATIC COMPOUNDS; FRUITS SPECIFIC; PIGMENTS; STORAGE; **STRAWBERRIES**

L7 ANSWER 6 OF 7 FSTA COPYRIGHT 2002 IFIS

AN 1986(03):H0089 FSTA

TI Storage stability and sensory quality of duhat (Syzygium cumini Linn.) anthocyanins as a food colorant.

AU Martinez, S. B.; Valle, M. J. del

CS Coll. of Home Economics, Univ. of the Philippines, Diliman, Quezon City, Philippines

SO UP Home Economics Journal, (1981), 9 (1) 7-10, 6 ref.

DT Journal

LA English

AB The anthocyanin pigments of duhat fruits were extracted, concentrated and

added to a beverage system. The pH of the beverages were adjusted to 3.0, 3.7 and 4.4. The beverages were stored at 12.degree. and 30.degree. C in the dark and exposed to **light** at 30.degree. C. Pigment stability decreased with increasing pH. Samples stored at 12.degree. C had minimal pigment breakdown after 75 days storage. All samples stored at 30.degree. C had considerable pigment breakdown, but samples with pH 3.0 and 3.7 still showed acceptable **color** after 75 days. Samples exposed to **light** faded slightly but had absorbance values similar to the samples in the dark. Results of sensory evaluation tets showed that the duhat anthocyanin pigments have acceptable colorant properties when compared to artificially colored **strawberry** and grape drinks. Flavor evaluation, however, showed that the duhat pigment extract imparted a detectable after-taste which could not be masked by normal levels of artificial flavoring. Purification of the crude extract would therefore be necessary to remove constituents which are responsible for the flavor.
CC H (Alcoholic and Non-Alcoholic Beverages)
CT ANTHOCYANINS; BEVERAGES; FRUITS SPECIFIC; SENSORY PROPERTIES; STABILITY; STORAGE; DUHAT FRUIT; DUHAT FRUIT # STORED; ORGANOLEPTIC PROPERTIES; STORED

L7 ANSWER 7 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1979(02):T0049 FSTA
TI Red and yellow pigments from betalaines hold promise as substitutes for colors banned by FDA.
AU Pasch, J. H.; Elbe, J. H. von
CS Dep. of Food Sci., Univ. of Wisconsin, Madison, Wisconsin, USA
SO Candy and Snack Industry, (1977), 142 (3) 32-35, 12 ref.
DT Journal
LA English
AB Betalaines are natural pigments found in red beetroot, poke berries, cacti and some flowers. They consist of both red (betacyanines) and yellow (betaxanthines) pigments; the principle betacyanine is betanine, whose colour is unaffected by solution pH in the range 3.0-7.0. The heat stability is substantially increased at pH 4-5, and at low water activities. Spray dried beetroot juice pressed from steamed beets was used to colour marshmallow, fondant, pectin gel, starch gum and hard candy prepared to standard formulas. Starch gums and candies were prepared with or without 2 oz citric acid/lb as an acidulant. Confectionery samples were stored under **light** at ambient temp. and 45% RH, and colour changes were followed using the Hunter **Color** Difference Meter. Betanine has a tinctorial strength approx. twice that of Red No. 40, and produced **strawberry**/cherry/raspberry colours in all confections at concn. of 8-33 p.p.m. Acidulated hard candy had an unacceptable orange colour due to acid sensitivity, and a low temp. of addition is recommended to reduce colour degradation. There were no visually detectable colour changes during 2 months storage.
CC T (Additives, Spices and Condiments)
CT BEETS; COLORANTS; FLAVONOIDS; JUICES; PIGMENTS; SUGAR CONFECTIONERY; VEGETABLE JUICES; BETALAINES; SPRAY-DRIED BEETROOT

=> s juice

=> s juice#

L8 25786 JUICE#

=> s l8 and color

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          1983 COLOR
L9         175 L8 AND COLOR

=> s l9 and blend#

          4559 BLEND#
L10          4 L9 AND BLEND#

=> dis all l10 1-4


L10  ANSWER 1 OF 4  FSTA  COPYRIGHT 2002 IFIS
AN   2002:H0662   FSTA
TI   Changes in color parameters of clarified apple and carrot
     blend juice using response surface methodology.
AU   Jun Ho Lee; Yong Hee Choi
CS   Div. of Food, Biol. & Chem. Eng., Taegu Univ., Kyungpook 712-714, Korea.
     Tel. 82 53 860 6535.  Fax 82 53 850 6539.  E-mail leejun(a)biho.taegu.ac.
     kr
SO   Food Science and Biotechnology, (2001), 10 (6) 673-676, 15 ref.
     ISSN: 1226-7708
DT   Journal
LA   English
AB   Ultrafiltration was used to clarify a blend of apple and carrot
     juice; effects of blend ratio (apple:carrot, 3:1, 1:1,
     1:3), temp. (5, 25, 45.degree.C) and ultrafiltration pressure (100, 150,
     200 kPa) were determined on juice colour.  Experiments were
     conducted in a plate-type ultrafiltration system using membranes with a
     mol. wt. cut off of 10 000 Da and data was analysed using response
surface
     methodology.  A temp. increase from 5 to 25.degree.C markedly increased
     brightness of juice samples, which then decreased at
     45.degree.C.  Brightness decreased considerably as inlet pressure
     increased from 100 to 150 kPa and increased thereafter.  However,
     brightness was not directly affected by the blend ratio.
     Redness increased considerably with temp. and the blend ratio
     and also with pressure increases from 100 to 150 kPa.  Yellowness was
     similarly affected by inlet pressure, but decreased linearly with
     increases in both temp. and blend ratio.  .DELTA.E decreased
     considerably as the blend ratio increased. Overall, the
     blend ratio (i.e. the amount of apple present) was found to have
     the greatest effect on juice colour.
CC   H (Alcoholic and Non-Alcoholic Beverages)
CT   APPLE JUICES; COLOUR; MIXING; PRESSURE; TEMPERATURE;
     ULTRAFILTRATION; VEGETABLE JUICES; BLENDING; CARROT
     JUICES; TEMP.

L10  ANSWER 2 OF 4  FSTA  COPYRIGHT 2002 IFIS
AN   2001(03):H0665   FSTA
TI   Color changes in clarified fruit and vegetable juices
     by mixing ratios.
AU   Jun-Ho Lee; Yong-Hee Choi
CS   Div. of Food, Biol. & Chem. Eng., Taegu Univ., Kyungsan 712-714, Korea.
     Tel. 82-53-850-6535.  Fax 82-53-850-6539.  E-mail
     leejun(a)biho.taegu.gaeg.ac.kr
SO   Journal of Food Science and Nutrition, (2000), 5 (4) 197-199, 13 ref.
     ISSN: 1226-332X
DT   Journal
LA   English
AB   Effects of the ratios of clarified fruit and vegetable juices
     (apple, carrot and tangerine) on the colour of resultant juice
     blends were investigated.  Clarification was carried out by
     passing the supernatant of extracted juice through a filter and
     also by using a membrane with mol. wt. cut-off of 10 kDa.  The ratio of
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apple to carrot **juices** was kept constant at 1:1 while the amount of tangerine ju[redacted] was varied from 10 to 50[redacted]; sa[redacted]es were then stored at 4.degree.C prior to colour measurement. Hue angle (h.sub.a.sub.b) and L*-value increased as the tangerine content increased. Colour difference indicated by .DELTA.E-value also increased as the amount of tangerine increased indicating that the colour of the mixed **juice** became pale; changes were slight but distinctive. In contrast, chroma (C*), a*- and b*-values decreased as the tangerine content increased indicating that colour of the mixed **juice** became slightly more grayish and that samples were becoming less yellow. A simple mathematical model to predict each colour characteristic is proposed.

CC H (Alcoholic and Non-Alcoholic Beverages)

CT **APPLE JUICES**; COLOUR; MIXING; **ORANGE JUICES**; **VEGETABLE JUICES**; BLENDING; **CARROT JUICES**; **TANGERINE JUICES**

L10 ANSWER 3 OF 4 FSTA COPYRIGHT 2002 IFIS

AN 1995(01):S0100 FSTA

TI Blood and pink **color** defects in poultry muscle.

AU Walters, B. S.

CS Univ. of Wisconsin-Madison, Madison, WI 53076, USA

SO Dissertation Abstracts International, B, (1994, thesis publ. 1993), 54 (10) 4980-4981 Order no. DA9332703, 122pp.
ISSN: 0419-4217

DT Dissertation

LA English

AB Colour defects in poultry meat are associated with decreased consumer acceptance. Blood and pink discolorations are examples of particular concern. Effects of environmental temp. on chicken carcass bleed-out were investigated. Commercially raised broilers were exposed to 4, 16, 27, or 35.degree.C for 8 h prior to slaughter. Parameters evaluated were live wt., percentage blood loss, blood pH, and absorbance of pigment extract from the breast, thigh, and drum meat. Birds exposed to 16.degree.C had the highest level of blood loss. Based on absorbance values, thigh and drum meat from birds exposed to 27 and 16.degree.C contained less residual blood than the other groups. The pink defect in oven-prepared turkey deli breast meat from 3 sources was evaluated to determine effects of addition of phosphate or nonfat dried milk (NFDM). A brine solution (water, NaCl, phosphate, and NFDM depending on the product) was added to the breast meat by tumbling or injection-tumbling. The pH values for raw meat, tumbled meat, cooked meat, brine, and purge **juice** were measured. Colour measurements were taken on cooked meat and purge **juice** using a Minolta Chroma Meter in a helium atmosphere. The neutral phosphate **Blend** 424 significantly decreased redness of the meat from one source. Meat samples from the other 2 sources had different textural characteristics which affected their reactions with the phosphates. NFDM, when added by injection-tumbling, darkened the overall product. No synergism was found between use of NFDM and phosphate. [From En summ.]

CC S (Meat, Poultry and Game)

CT ADDITIVES; CARCASSES; CHICKEN MEAT; CHICKENS; COLOUR; MEAT; MEAT SPECIFIC; PHYSICAL PROPERTIES; POULTRY; POULTRY MEAT; TEMPERATURE; TURKEY MEAT; TURKEYS; CHICKEN CARCASSES; DEFECTS; TEMP.

L10 ANSWER 4 OF 4 FSTA COPYRIGHT 2002 IFIS

AN 1984(09):H1764 FSTA

TI **Color** stability of apple and pear **juices** blended with fruit **juices** containing anthocyanins.

AU Spayd, S. E.; Nagel, C. W.; Hayrynen, L. D.; Drake, S. R.

CS Dep. of Food Sci. & Human Nutr., Washington State Univ., Prosser,

Washington 99350, USA
SO Journal of Food Science, (1984), 49 (2) 411-414
DT Journal
LA English
AB Apple and pear **juices** blended with anthocyanin pigmented **juices** developed haze and colour stability during commercial marketing. To determine factors contributing to these problems, **juice** from apple and d'Anjou pear (prepared from whole fruit) and 'Bartlett' pear (peels and cores) were blended with 5, 10, 20% 'Concord' grape, 'Bing' cherry, or red or black raspberry **juice**. During storage at 25.degree. C for up to 48 wk, turbidity, polymeric colour, and % colour due to tannin increased, while anthocyanin concn. decreased. As anthocyanin pigmented **juice** increased, turbidity and polymeric colour increased and % colour due to tannin decreased. Within a given base **juice**, turbidity was highly correlated with polymeric colour (r = 0.78-0.97).
CC H (Alcoholic and Non-Alcoholic Beverages)
CT ANTHOCYANINS; **APPLE JUICES**; COLOUR; **FRUIT JUICES**; PEARS; TURBIDITY; **APPLE-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**; HAZE; **PEAR-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**

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                   frequency
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=> s strawberry or strawberries

          1979 STRAWBERRY
          2378 STRAWBERRIES
L1        3209 STRAWBERRY OR STRAWBERRIES

=> s l1 and Sistrunk

             0 SISTRUNK
L2           0 L1 AND SISTRUNK

=> s l1 and sistrunck

             0 SISTRUNCK
L3           0 L1 AND SISTRUNCK

=> s l1 and color

          1983 COLOR
L4          44 L1 AND COLOR

=> s l4 and Pratt

            16 PRATT
L5           0 L4 AND PRATT

=> s l4 and light(w)color

         12063 LIGHT
          1983 COLOR
             1 LIGHT(W)COLOR
L6           0 L4 AND LIGHT(W)COLOR

=> s l4 and light

         12063 LIGHT
L7           7 L4 AND LIGHT

=> dis all l7 1-7


L7   ANSWER 1 OF 7  FSTA  COPYRIGHT 2002 IFIS
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AN 2000(06):J1310 FSTA
TI Influence of processing and storage conditions in strawberry jam color.
AU Garcia-Viguera, C.; Zafrilla, P.; Tomas-Barberan, F. A.
CS Lab. Fitoquimica, Dep. Ciencia y Tec. de Alimentos, CEBAS-CSIC, Apdo Correos 4195, 30080 Murcia, Spain. E-mail cgviguera(a)natura.cebas.csic.es
SO Food Science and Technology International/Ciencia y Tecnologia de Alimentos Internacional, (1999), 5 (6) 487-492, 14 ref. ISSN: 1082-0132
DT Journal
LA English
SL Spanish
AB The influence of processing and storage on colour and anthocyanin content of **strawberry** jams was studied. A series of trials was carried out on the effects of processing (boiling) time, jam storage temp., presence/absence of **light** during storage, and long term frozen storage of fruit prior to jam preparation. Processing time was shown to be a determining factor of colour quality as boiling for >15 min had a deleterious effect on jam colour. Simulated daylight conditions caused insignificant colour and anthocyanin losses during storage, compared with jams stored in total darkness. However, no direct relationship was found between anthocyanin loss during processing and storage, and resulting jam colour. Storage of fruit for 1 yr at -20.degree.C prior to jam preparation resulted in anthocyanin losses of 77., whereas fruit stored for 6 months had <20% anthocyanin loss.
CC J (Fruits, Vegetables and Nuts)
CT ANTHOCYANINS; BOILING; COLOUR; JAMS; STORAGE; **STRAWBERRIES**; **STRAWBERRY JAMS**

L7 ANSWER 2 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1997(07):H0174 FSTA
TI Comparison of the stability of selected anthocyanin colorants in drink model systems.
AU Duhard, V.; Garnier, J. C.; Megard, D.
CS Correspondence (Reprint) address, D. Megard, Aromes de Bretagne-Diana, BP 8, 35560 Antrain sur Couesnon, France
SO Agro Food Industry hi-tech, (1997), 8 (1) 28-34, 57 ref.
DT Journal
LA English
AB Colorant and stability properties of colorants based on red cabbage, grape, hibiscus, purple-corn, elderberry, red beet and cochineal were compared in sugar and non-sugar drink model systems. Red cabbage (RC) extract imparted a purple-red **color** similar to that of beet red and more pink-purple than that of the other anthocyanin extracts tested, which displayed **strawberry**-red to brown-red hues at pH .ltoreq.4.0. RC pigments were more stable than other anthocyanin pigments during heating (80.degree.C) of drink model at pH 3.0 and more stable than most of them at pH 3.5. At pH 4.0, grape showed the best heat stability compared to other anthocyanin sources. However, at pH<4.0, RC-colored drink models displayed a purple hue for as long as 24h at 80.degree.C, whereas all the other tested anthocyanin extracts produced brown-red drinks as early as 8h at 80.degree.C, and beet red as early as 1h at 80.degree.C. Grape and RC were the most stable anthocyanin sources during **light** exposure of drink models, both at pH 3.0 and 4.0, for as long as 8 weeks at 20.degree.C. In these conditions, cochineal extracts showed extremely high **light** and heat stability, over all the anthocyanin extracts.
CC H (Alcoholic and Non-Alcoholic Beverages)
CT ADDITIVES; ANTHOCYANINS; AROMATIC COMPOUNDS; BEVERAGES; COLORANTS; PHYSICAL PROPERTIES; PIGMENTS; STABILITY

L7 ANSWER 3 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1995(10):J0060 FSTA
TI Development of aroma volatiles and **color** during postharvest ripening of Kent **strawberries**.
AU Miszczak, A.; Forney, C. F.; Prange, R. K.
CS Agric. & Agri-Food Canada, Kentville Res. Cent., 32 Main St., Kentville, NS B4N 1J5, Canada
SO Journal of the American Society for Horticultural Science, (1995), 120 (4)
650-655, 25 ref.
ISSN: 0003-1062
DT Journal
LA English
AB Kent **strawberries** were harvested at red, pink and white states of development, and stored at 15.degree.C in the **light**. Fruit were sampled over a 10-day period and evaluated for volatile production and surface colour. Volatile production by red and pink fruit peaked after 4 days of storage. Max. volatile production by red fruit was 8- and 25-fold greater than max. production by pink and white fruit, respectively. Aroma volatiles were not detected in the headspace over white berries until 4 days following harvest after which volatile production increased through the tenth day of storage. Changes in the surface colour of white berries during postharvest ripening coincided with the production of volatiles. In another experiment, red, pink, and white Kent **strawberries** were stored for 3 days at 10 or 20.degree.C in the dark or **light**. Fruit were then evaluated for volatile production, wt. loss, anthocyanin content, and surface colour changes. White berries produced volatile esters after 3 days of storage at 20.degree.C in the **light**. Both **light** and temp. influenced the relative production of the volatiles produced by pink fruit. Fresh wt. loss, colour change, and anthocyanin content were temp. and **light** dependent.
CC J (Fruits, Vegetables and Nuts)
CT COLOUR; FRUITS SPECIFIC; PHYSICAL PROPERTIES; RIPENING; **STRAWBERRIES**; VOLATILE COMPOUNDS

L7 ANSWER 4 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1995(06):J0055 FSTA
TI Response in genotypic and breeding value to a single generation of divergent selection for fresh fruit **color** in **strawberry**.
AU Shaw, D. V.; Sacks, E. J.
CS Pomology Dep., Univ. of California, Davis, CA 95616, USA
SO Journal of the American Society for Horticultural Science, (1995), 120 (2)
270-273, 20 ref.
ISSN: 0003-1062
DT Journal
LA English
AB Four sets of selected **strawberry** genotypes were generated from within a single breeding population to evaluate the correspondence between predicted and realized selection response for fresh fruit colour traits. Genotypes were selected for extreme phenotypes, dark or **light**, of either internal or external colour value (CIELAB L.sup.*). Realized selection response was slightly larger than predicted for internal and external L.sup.* when calculated for selected genotypes. >50 of the selected genotypes had genotypic values for L.sup.* outside the range of the original parents. Realized selection response for breeding value in exterior and interior colour was slightly less than predicted. Compared in a different way, genotypic selection response for external colour was significantly greater than selection response for breeding value, whereas

genotypic and breeding value responses did not differ for internal colour.
These observations suggest the presence of some nonadditive genetic variance for external colour but support the conclusion that the heritabilities predicted previously were reasonably accurate. Estimates of
variance components within each of the offspring populations demonstrated that genetic variances were modified substantially by one generation of selection. Selection for dark fruit colour reduced genetic variance to nonsignificant levels, with internal colour more affected than external colour. Total genetic variances within both of the offspring populations from parents selected for **light** colour were changed little by one generation of selection, but substantial dominance variance was detected that had not been found in the original population. The rapid response to selection and large changes in the distribution of genetic variances may indicate the presence of a few genes with comparatively large effect in **strawberry** colour expression. Additional divergent selection response can be expected, but primarily towards **light** fruit colour.
CC J (Fruits, Vegetables and Nuts)
CT COLOUR; FRUITS SPECIFIC; GENETICS; PHYSICAL PROPERTIES; **STRAWBERRIES**; GENOTYPE

L7 ANSWER 5 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1993(12):J0058 FSTA
TI Postharvest **color** development of **strawberries**: influence of maturity, temperature and **light**.
AU Kalt, W.; Prange, R. K.; Lidster, P. D.
CS Agric. Canada, Res. Sta., Kentville, NS B4N 1J5, Canada
SO Canadian Journal of Plant Science, (1993), 73 (2) 541-548, 9 ref.
ISSN: 0008-4220
DT Journal
LA English
SL French
AB **Strawberries** (cv. Blomidon) that were either completely white or red at harvest were stored up to 8 days under various temp. and **light** conditions to examine the effects of storage conditions on postharvest colour development. **Strawberries**, stored at 5, 10, 20 or 30.degree.C and at **light** levels of 0, 100 or 200 .mu.mol m.sup.-.sup.2 s.sup.-.sup.1, were sampled for anthocyanin concn., surface colour, total soluble solids, titratable acidity, pH of the berry surface and berry wt. loss after 0, 1, 2, 5 and 8 days of storage. Anthocyanin concn. and surface colour increased during storage with greater changes in
the white-harvested than red-harvested fruit. Temp., and to a lesser extent **light**, affected rate of **strawberry** colour development during storage. After 8 days, the proportions of the 2 major **strawberry** anthocyanins, pelargonidin 3-glucoside and cyanidin 3-glucoside, were different in red-harvested fruit and white fruit that became red during storage, compared to field-ripened fruit at harvest.
CC J (Fruits, Vegetables and Nuts)
CT ANTHOCYANINS; AROMATIC COMPOUNDS; FRUITS SPECIFIC; PIGMENTS; STORAGE; **STRAWBERRIES**

L7 ANSWER 6 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1986(03):H0089 FSTA
TI Storage stability and sensory quality of duhat (Syzygium cumini Linn.) anthocyanins as a food colorant.
AU Martinez, S. B.; Valle, M. J. del
CS Coll. of Home Economics, Univ. of the Philippines, Diliman, Quezon City, Philippines
SO UP Home Economics Journal, (1981), 9 (1) 7-10, 6 ref.
DT Journal
LA English
AB The anthocyanin pigments of duhat fruits were extracted, concentrated and

added to a beverage system. The pH of the beverages were adjusted to 3.0, 3.7 and 4.4. These beverages were stored at 12.degree. and 30.degree. C in the dark and exposed to **light** at 30.degree. C. Pigment stability decreased with increasing pH. Samples stored at 12.degree. C had minimal pigment breakdown after 75 days storage. All samples stored at 30.degree. C had considerable pigment breakdown, but samples with pH 3.0 and 3.7 still showed acceptable **color** after 75 days. Samples exposed to **light** faded slightly but had absorbance values similar to the samples in the dark. Results of sensory evaluation tets showed that the duhat anthocyanin pigments have acceptable colorant properties when compared to artificially colored **strawberry** and grape drinks. Flavor evaluation, however, showed that the duhat pigment extract imparted a detectable after-taste which could not be masked by normal levels of artificial flavoring. Purification of the crude extract would therefore be necessary to remove constituents which are responsible for the flavor.
CC H (Alcoholic and Non-Alcoholic Beverages)
CT ANTHOCYANINS; BEVERAGES; FRUITS SPECIFIC; SENSORY PROPERTIES; STABILITY; STORAGE; DUHAT FRUIT; DUHAT FRUIT # STORED; ORGANOLEPTIC PROPERTIES; STORED

L7 ANSWER 7 OF 7 FSTA COPYRIGHT 2002 IFIS
AN 1979(02):T0049 FSTA
TI Red and yellow pigments from betalaines hold promise as substitutes for colors banned by FDA.
AU Pasch, J. H.; Elbe, J. H. von
CS Dep. of Food Sci., Univ. of Wisconsin, Madison, Wisconsin, USA
SO Candy and Snack Industry, (1977), 142 (3) 32-35, 12 ref.
DT Journal
LA English
AB Betalaines are natural pigments found in red beetroot, poke berries, cacti and some flowers. They consist of both red (betacyanines) and yellow (betaxanthines) pigments; the principle betacyanine is betanine, whose colour is unaffected by solution pH in the range 3.0-7.0. The heat stability is substantially increased at pH 4-5, and at low water activities. Spray dried beetroot juice pressed from steamed beets was used to colour marshmallow, fondant, pectin gel, starch gum and hard candy prepared to standard formulas. Starch gums and candies were prepared with or without 2 oz citric acid/lb as an acidulant. Confectionery samples were stored under **light** at ambient temp. and 45% RH, and colour changes were followed using the Hunter **Color** Difference Meter. Betanine has a tinctorial strength approx. twice that of Red No. 40, and produced **strawberry**/cherry/raspberry colours in all confections at concn. of 8-33 p.p.m. Acidulated hard candy had an unacceptable orange colour due to acid sensitivity, and a low temp. of addition is recommended to reduce colour degradation. There were no visually detectable colour changes during 2 months storage.
CC T (Additives, Spices and Condiments)
CT BEETS; COLORANTS; FLAVONOIDS; JUICES; PIGMENTS; SUGAR CONFECTIONERY; VEGETABLE JUICES; BETALAINES; SPRAY-DRIED BEETROOT

=> s juice

=> s juice#

L8 25786 JUICE#

=> s l8 and color

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          1983 COLOR
L9         175 L8 AND COLOR

=> s l9 and blend#

          4559 BLEND#
L10          4 L9 AND BLEND#

=> dis all l10 1-4


L10  ANSWER 1 OF 4  FSTA  COPYRIGHT 2002 IFIS
AN   2002:H0662   FSTA
TI   Changes in color parameters of clarified apple and carrot
     blend juice using response surface methodology.
AU   Jun Ho Lee; Yong Hee Choi
CS   Div. of Food, Biol. & Chem. Eng., Taegu Univ., Kyungpook 712-714, Korea.
     Tel. 82 53 860 6535.  Fax 82 53 850 6539.  E-mail leejun(a)biho.taegu.ac.
     kr
SO   Food Science and Biotechnology, (2001), 10 (6) 673-676, 15 ref.
     ISSN: 1226-7708
DT   Journal
LA   English
AB   Ultrafiltration was used to clarify a blend of apple and carrot
     juice; effects of blend ratio (apple:carrot, 3:1, 1:1,
     1:3), temp. (5, 25, 45.degree.C) and ultrafiltration pressure (100, 150,
     200 kPa) were determined on juice colour.  Experiments were
     conducted in a plate-type ultrafiltration system using membranes with a
     mol. wt. cut off of 10 000 Da and data was analysed using response
surface
     methodology.  A temp. increase from 5 to 25.degree.C markedly increased
     brightness of juice samples, which then decreased at
     45.degree.C.  Brightness decreased considerably as inlet pressure
     increased from 100 to 150 kPa and increased thereafter.  However,
     brightness was not directly affected by the blend ratio.
     Redness increased considerably with temp. and the blend ratio
     and also with pressure increases from 100 to 150 kPa.  Yellowness was
     similarly affected by inlet pressure, but decreased linearly with
     increases in both temp. and blend ratio.  .DELTA.E decreased
     considerably as the blend ratio increased. Overall, the
     blend ratio (i.e. the amount of apple present) was found to have
     the greatest effect on juice colour.
CC   H (Alcoholic and Non-Alcoholic Beverages)
CT   APPLE JUICES; COLOUR; MIXING; PRESSURE; TEMPERATURE;
     ULTRAFILTRATION; VEGETABLE JUICES; BLENDING; CARROT
     JUICES; TEMP.

L10  ANSWER 2 OF 4  FSTA  COPYRIGHT 2002 IFIS
AN   2001(03):H0665   FSTA
TI   Color changes in clarified fruit and vegetable juices
     by mixing ratios.
AU   Jun-Ho Lee; Yong-Hee Choi
CS   Div. of Food, Biol. & Chem. Eng., Taegu Univ., Kyungsan 712-714, Korea.
     Tel. 82-53-850-6535.  Fax 82-53-850-6539.  E-mail
     leejun(a)biho.taegu.gaeg.ac.kr
SO   Journal of Food Science and Nutrition, (2000), 5 (4) 197-199, 13 ref.
     ISSN: 1226-332X
DT   Journal
LA   English
AB   Effects of the ratios of clarified fruit and vegetable juices
     (apple, carrot and tangerine) on the colour of resultant juice
     blends were investigated.  Clarification was carried out by
     passing the supernatant of extracted juice through a filter and
     also by using a membrane with mol. wt. cut-off of 10 kDa.  The ratio of
```

apple to carrot **juices** was kept constant at 1:1 while the amount of tangerine juice was varied from 10 to 50%; samples were then stored at 4.degree.C prior to colour measurement. Hue angle (h.sub.a.sub.b) and L*-value increased as the tangerine content increased. Colour difference indicated by .DELTA.E-value also increased as the amount of tangerine increased indicating that the colour of the mixed **juice** became pale; changes were slight but distinctive. In contrast, chroma (C*), a*- and b*-values decreased as the tangerine content increased indicating that colour of the mixed **juice** became slightly more grayish and that samples were becoming less yellow. A simple mathematical model to predict each colour characteristic is proposed.

CC H (Alcoholic and Non-Alcoholic Beverages)

CT **APPLE JUICES**; COLOUR; MIXING; **ORANGE JUICES**; **VEGETABLE JUICES**; BLENDING; **CARROT JUICES**; **TANGERINE JUICES**

L10 ANSWER 3 OF 4 FSTA COPYRIGHT 2002 IFIS

AN 1995(01):S0100 FSTA

TI Blood and pink **color** defects in poultry muscle.

AU Walters, B. S.

CS Univ. of Wisconsin-Madison, Madison, WI 53076, USA

SO Dissertation Abstracts International, B, (1994, thesis publ. 1993), 54 (10) 4980-4981 Order no. DA9332703, 122pp.
ISSN: 0419-4217

DT Dissertation

LA English

AB Colour defects in poultry meat are associated with decreased consumer acceptance. Blood and pink discolorations are examples of particular concern. Effects of environmental temp. on chicken carcass bleed-out were investigated. Commercially raised broilers were exposed to 4, 16, 27, or 35.degree.C for 8 h prior to slaughter. Parameters evaluated were live wt., percentage blood loss, blood pH, and absorbance of pigment extract from the breast, thigh, and drum meat. Birds exposed to 16.degree.C had the highest level of blood loss. Based on absorbance values, thigh and drum meat from birds exposed to 27 and 16.degree.C contained less residual blood than the other groups. The pink defect in oven-prepared turkey deli breast meat from 3 sources was evaluated to determine effects of addition of phosphate or nonfat dried milk (NFDM). A brine solution (water, NaCl, phosphate, and NFDM depending on the product) was added to the breast meat by tumbling or injection-tumbling. The pH values for raw meat, tumbled meat, cooked meat, brine, and purge **juice** were measured. Colour measurements were taken on cooked meat and purge **juice** using a Minolta Chroma Meter in a helium atmosphere. The neutral phosphate **Blend** 424 significantly decreased redness of the meat from one source. Meat samples from the other 2 sources had different textural characteristics which affected their reactions with the phosphates. NFDM, when added by injection-tumbling, darkened the overall product. No synergism was found between use of NFDM and phosphate. [From En summ.]

CC S (Meat, Poultry and Game)

CT ADDITIVES; CARCASSES; CHICKEN MEAT; CHICKENS; COLOUR; MEAT; MEAT SPECIFIC; PHYSICAL PROPERTIES; POULTRY; POULTRY MEAT; TEMPERATURE; TURKEY MEAT; TURKEYS; CHICKEN CARCASSES; DEFECTS; TEMP.

L10 ANSWER 4 OF 4 FSTA COPYRIGHT 2002 IFIS

AN 1984(09):H1764 FSTA

TI **Color** stability of apple and pear **juices** blended with fruit **juices** containing anthocyanins.

AU Spayd, S. E.; Nagel, C. W.; Hayrynen, L. D.; Drake, S. R.

CS Dep. of Food Sci. & Human Nutr., Washington State Univ., Prosser,

Washington 99350, USA
SO Journal of Food Science, (1984), 49 (2) 411-414
DT Journal
LA English
AB Apple and pear **juices** blended with anthocyanin pigmented **juices** developed haze and colour stability during commercial marketing. To determine factors contributing to these problems, **juice** from apple and d'Anjou pear (prepared from whole fruit) and 'Bartlett' pear (peels and cores) were blended with 5, 10, 20% 'Concord' grape, 'Bing' cherry, or red or black raspberry **juice**. During storage at 25.degree. C for up to 48 wk, turbidity, polymeric colour, and % colour due to tannin increased, while anthocyanin concn. decreased. As anthocyanin pigmented **juice** increased, turbidity and polymeric colour increased and % colour due to tannin decreased. Within a given base **juice**, turbidity was highly correlated with polymeric colour (r = 0.78-0.97).
CC H (Alcoholic and Non-Alcoholic Beverages)
CT ANTHOCYANINS; **APPLE JUICES**; COLOUR; **FRUIT JUICES**; PEARS; TURBIDITY; **APPLE-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**; HAZE; **PEAR-ANTHOCYANINS PIGMENTED FRUIT JUICE BLENDS**